

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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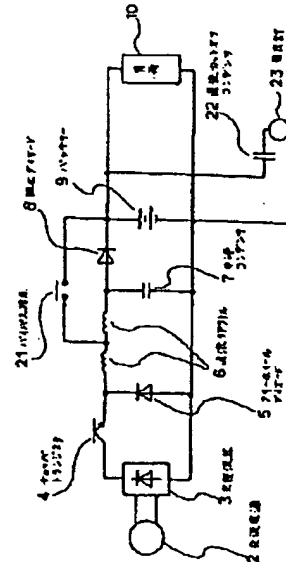
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APPLICANT : FUJI ELECTRIC CO LTD;

INVENTOR : OKAMURA KOICHI;

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TITLE : BATTERY FAILURE SENSING DEVICE



**ABSTRACT :** PURPOSE: To find failure in a battery, which is to be charged, in an early stage by charging the battery with a current including a large quantity of ripple components, and sensing change in the internal impedance of the battery as the amount of voltage drop through a DC cutoff capacitor.

**CONSTITUTION:** A battery failure sensing device concerned is equipped with a smoother circuit comprising a DC power supply 3 giving a DC output with a desired voltage through the on/off operation of a switching element 4, a battery 9 to be charged, a DC reactor 6, and a smoothing capacitor 7. If therein a bypass contact 21 is closed while an uninterruptive power supply is in operation, the battery 9 is charged with a current including a large quantity of ripple components given out of a chopper transistor 4. Accordingly the AC internal impedance has been changed even though the battery 9 is in its early period of degradation, so that the voltage fall is taken out through a DC cutoff capacitor 22 and measured by a voltmeter 23. Thus the degree of degradation can be sensed in an early stage.

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